

---

Citation:

Zwolinsky, S and McKenna, J (2015) Bodyline Access Scheme: Final Report, August 2015. Project Report. UNSPECIFIED. (Unpublished)

Link to Leeds Beckett Repository record:

<https://eprints.leedsbeckett.ac.uk/id/eprint/2303/>

Document Version:

Monograph (Submitted Version)

---

The aim of the Leeds Beckett Repository is to provide open access to our research, as required by funder policies and permitted by publishers and copyright law.

The Leeds Beckett repository holds a wide range of publications, each of which has been checked for copyright and the relevant embargo period has been applied by the Research Services team.

We operate on a standard take-down policy. If you are the author or publisher of an output and you would like it removed from the repository, please [contact us](#) and we will investigate on a case-by-case basis.

Each thesis in the repository has been cleared where necessary by the author for third party copyright. If you would like a thesis to be removed from the repository or believe there is an issue with copyright, please contact us on [openaccess@leedsbeckett.ac.uk](mailto:openaccess@leedsbeckett.ac.uk) and we will investigate on a case-by-case basis.

LEEDS BECKETT UNIVERSITY

# Bodyline Access Scheme:

---

Final Report: Draft



Final Report: August 2015

## Reader Information

This report was prepared by Stephen Zwolinsky and Professor Jim McKenna.

Report Reference:

Zwolinsky, S. and McKenna, J. (2015). ***Bodyline Access Scheme: Final Report, August 2015: Draft.***  
Centre for Active Lifestyles, Leeds Beckett University.

### Contact Details:

Stephen Zwolinsky,  
102 Fairfax Hall,  
Leeds Beckett University,  
Headingley Campus,  
Leeds,  
LS6 3QS  
Phone: 0113 812 9107  
Email: [S.Zwolinsky@leedsbeckett.ac.uk](mailto:S.Zwolinsky@leedsbeckett.ac.uk)

# Contents

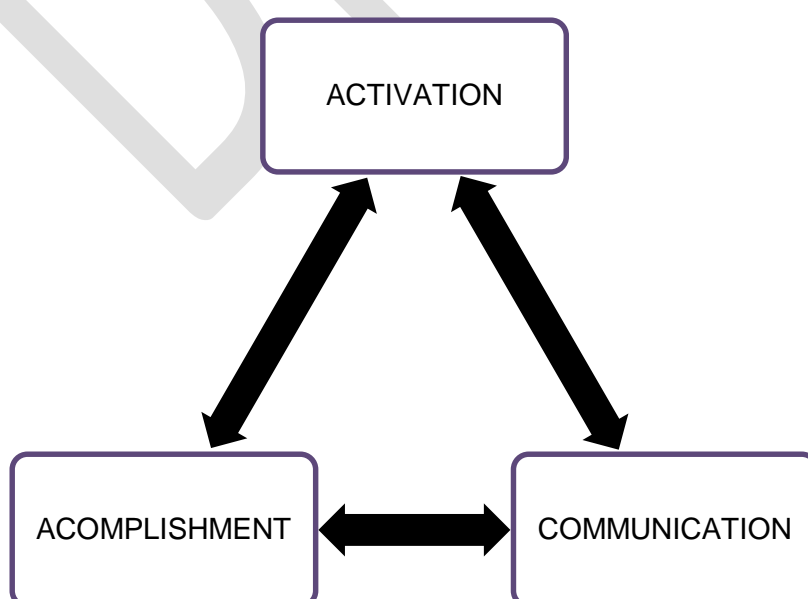
<b>Reader Information .....</b>	<b>1</b>
<b>Contents .....</b>	<b>2</b>
<b>Executive Summary .....</b>	<b>3-7</b>
<b>1. Introduction .....</b>	<b>8</b>
<b>2. Methodology .....</b>	<b>9</b>
<b>3. Results .....</b>	<b>10-36</b>
<b>3.1 Theoretical Thematic Analysis .....</b>	<b>10-28</b>
3.1.1 - DEMOGRAPHIC & BIOLOGICAL FACTORS .....	11-13
<i>Gender .....</i>	11
<i>Age .....</i>	11-12
<i>Circumstantial prioritisation .....</i>	12-13
<i>Injury &amp; chronic conditions .....</i>	13
3.1.2 - PSYCHOLOGICAL FACTORS .....	14-16
<i>Motivation .....</i>	14
<i>Locus of Control .....</i>	14-15
<i>Self-Efficacy .....</i>	15
<i>Goal Setting .....</i>	15-16
<i>Increase Health Awareness .....</i>	16
3.1.3 - BEHAVIOURAL ATTRIBUTES & SKILL .....	17-19
<i>Activity History .....</i>	17
<i>Processes of Change .....</i>	18-19
<i>Coping .....</i>	19
3.1.4 - SOCIAL & CULTURAL FACTORS .....	20-22
<i>Social Support .....</i>	20-21
<i>Peer to Peer Support &amp; Mentors .....</i>	21-22
3.1.5 - PHYSICAL ENVIRONMENTAL FACTORS .....	23-26
<i>Setting .....</i>	23-24
<i>Facilities .....</i>	24-25
<i>Cost to the participant .....</i>	25-26
3.1.6 - PHYSICAL ACTIVITY CHARACTERISTICS .....	27-28
<i>Frequency .....</i>	27
<i>Intensity .....</i>	27-28
<i>Time .....</i>	28
<i>Type or mode .....</i>	28
<b>3.2 Inductive Thematic Analysis .....</b>	<b>29-36</b>
3.2.1 - ACTIVATION .....	30-31
3.2.2 - ACCOMPLISHMENT .....	32-33
3.2.3 - COMMUNICATION .....	34-36
<b>4. References .....</b>	<b>37</b>

## Executive Summary

This document highlights the findings from semi structured interviews undertaken with 'stakeholders' involved in the '*Bodyline Access Scheme*' (BAS). The 'stakeholders' are categorised in to one of three main groups; (i) the participants, (ii) referral agents – including GP's and practice nurses, and (iii) the providers - including delivery staff and project leaders. The interviews sought to establish the proximal determinants of the BAS and its effectiveness.

To help establish the underlying features of success, the processes that drive these features and the schemes effectiveness, data were mapped against key physical activity determinants. There are six categories of determinants that influence physical activity participation; demographic and biological, psychological, behavioural attributes and skill, social and cultural, the physical environment and the physical activity characteristics (1). In addition, three main interacting themes were identified underlying dialog about the BAS. These were (i) Activation, by initiating action and doing activity (ii) Accomplishment, which was about achievement through effort, time and commitment, and (iii) Communication, linked to relationships, intervention messages and how stakeholders communicate with each other (see figure 1). These core themes underpinned the BAS and were inextricably linked to the determinants and development opportunities within it.

Figure 1: Underlying themes within the BAS



Barriers to participation:

BAS stakeholders presented a diverse range of barriers detailing why participants typically do not engage with physical activity opportunities. Outlined below are the most salient barriers to engagement reported by stakeholders and examples of how the BAS overcame them, facilitated participation and recommendations for future practice.

- **INJURY or ILLNESS** – Many participants who were chronically inactive prior to the BAS reported that injury/illness was one of the main barriers to physical activity participation. Many participants felt unable to live an active lifestyle as a result of their condition. However, this barrier became a motivational tool (i.e. participation may help alleviate symptoms/manage condition) and an influential enabler for some participants beginning a physical activity programme. Nevertheless, it is important to manage expectation and promote activities minimising injury risk and attrition, especially among inactive individuals.
- **ACTIVITY HISTORY** – Physical activity patterns in childhood are strongly linked to adult engagement, findings from this work reinforced the benefits of promoting physical activity to younger individuals. However, the structured/supervised nature of the sessions discouraged some individuals, especially those with a limited history of physical activity and sports participation. For some individuals, previous negative experiences of exercise/activity undermined interest in ever becoming active. For inactive individuals, competition, high level exertion, social judgements of competence and social standing were powerful reasons not to engage. Therefore, these features should be included with caution. Moderate and lower intensity activities are likely to be better buys compared to vigorous activity for long-term maintenance of activity behaviour. Optimal practice should match the intensity and mode of activity to the individual.
- **SELF-EFFICACY** – Many inactive participants reported low self-efficacy for physical activity, often as a result of injury, illness or a negative activity history. Personal experiences of success and failure influenced participant's expectations of future success. Fundamentally, success raised expectations and repeated failures lower them, especially if the failure

occurred early within a programme. Providing appropriate tailored activities related to an individual's skill and reviewing participant's performance in those activities may help enhance self-efficacy. Imitation and modelling were also important for future efficacy beliefs, especially when a participant had empathy with the 'model'. Observing others succeed or fail - particularly when participants had little or no experience to draw on - was central to the outcome. To optimise self-efficacy, 'models' should be similar to the individual and competent in the activity.

- **MOTIVATION** – A lack of motivation for physical activity and exercise was a common barrier to becoming physically active among BAS participants, motivations typically centred on four main factors. Two of these related to performance; (i) achievement and (ii) mastery/performance and the other two related to fitness and health; (iii) physical wellbeing and (iv) socio psychological well-being. In general males are higher than females on the two performance factors and younger participants are less interested than others in socio-psychological well-being. Understanding that motivation to engage the BAS is not uniform should underpin marketing aimed at encouraging engagement. Age and gender related factors are likely to have an influence on motivation and should be taken into consideration.
- **COMMUNICATION**– Many referral agents encountered barriers when attempting to signpost participants to the BAS due to complications determining what was available for each participant. Given the range of exercise offers available simultaneously, it was reported that there was a lack of clarity and delineation. Developing a paper based and on-line LLGA/BAS flowchart may help alleviate this issue. It may also help referral agents to develop an understanding of what criteria needs to be met for a referral to each element of the programme, at each stage of the pathway. To improve self-efficacy, it has been recommended that participants have their performance reviewed. However, at present, this is not possible as the referral agents receive no communication from the providers regarding a participant's engagement. Relaying simple information including who signed up, who attended and how often they attended would be undeniably useful for behaviour change strategies and enhancing the customer pathway.

*How the BAS Enables Participation:*

Despite the barriers that many participants faced when attempting to become more active, BAS stakeholders reported numerous positive properties within the programme that enabled engagement. Linked to the underlying themes within the BAS (see figure 1), this sections looks to provide insight into the active design characteristics of the programme that enabled change.

- **COST** – Cost is commonly professed to be a major determinant for initiating physical activity. Often seen as a common cause for attrition, it is also repeatedly coupled with reduced participation. Stakeholders reported that cost and lack of money were principal inhibitors to an active lifestyle. While cost presented an easily articulated determinant for participants, it becomes more challenging to fully understand the extent to which it effects recruitment. Perceived financial determinants may merely be proxies for poor individual motivation. Nevertheless, the BAS illustrates how reduced price/free offers can activate exercise ‘try-outs’ for inactive participants and lead to more active lifestyles. After 3 months, although many participants continued to be active, some reverted back to previous sedentary habits citing cost as the principal cause. At present there is no facility to extend the offer for participants, although, it may be beneficial to renew the scheme for some inactive individuals, especially those with long term conditions.
- **SETTING** – The ‘setting’ or location of the BAS was seen as a major component of successful uptake and increased activity. The ease of access, including location and familiarity with the venue was important. Coupled with a safe and trusted environment, participants reported that they felt relaxed and in control. This familiarity did not just mean places that people had already visited per se, but could include settings that had appeal to inactive individuals. Even if they did not identify as an active bodyline member, they may still recognise the setting as ‘friendly’ and therefore comfortable and familiar.
- **LOCUS OF CONTROLL** – In this context, locus of control refers to the extent to which participants perceive that physical activity opportunities are within their control (internal),



are controlled by others or due to chance (external). In general, individuals with a higher internal locus of control are more likely to adhere to programs compared to those with a high external locus of control. Several participants reported that the BAS gave them accountability regarding physical activity and opportunities to be active that they had not experienced before. They felt able to cope and act decisively about physical activity. The low cost implications and setting of the BAS were sighted as primary reasons for newly developed internal locus of control. In the future, the BAS may benefit from nurturing elements of the programme that give participants power to make decisions that affect their activity habits. To achieve this, it is important that participants are rewarded for their success (i.e. achieving weight loss targets). One possible pathway to manage this may be to incorporate a performance review with a referral agent.

- SOCIAL SUPPORT** – Social influence in the form of social support typically has a strong positive association with physical activity. The presence and interest of other people provides reinforcement and keeps the behaviour prominent. Changing a behaviour – i.e. moving from inactive to active – can be stressful, therefore, maintaining social support is essential for individuals and groups. Many participants reported that positive social elements within the programme helped them to deal with adversity when starting to become active. For some participants, the leisure centre setting facilitated an environment for social interactions that may not have occurred in other everyday situations. This enabled participants to interact socially and develop social support networks more readily. A sense of belonging to a group was also important, participants who were or may have felt socially excluded had the opportunity to mix with like-minded individuals and engage in physical activity. Once engaged the social support and networks available were amenable to maintenance of activity behaviour, however, gaining that initial engagement was more problematic and there was not the same support available in many instances. One method that may help improve the service might be to incorporate a buddying system to help people through the enrolment process and first visit.

# 1: Introduction

## ***Aim of this report***

This report provides a rapid qualitative analysis of the 'Bodyline Access Scheme' (BAS) from interviews undertaken with BAS stakeholders from July 2014 – April 2015. The BAS enables inactive individuals to sign-up for off-peak access to Leeds leisure centre facilities for a three month period (12 weeks), for a fee of £5. This report aims to determine the characteristics that underpin schemes success and areas for development.

## ***What are the benefits of physical activity?***

The benefits of physical activity have been clearly set out across the life course. Doing at least 30 minutes of moderate intensity physical activity on at least 5 days a week for adults can play an important role in preventing and managing over 20 chronic health conditions, including type 2 diabetes, coronary heart disease, stroke, mental wellbeing, musculoskeletal health and some cancers (2). There is a clear causal relationship between the amount of activity undertaken by individuals and all-cause mortality. Although improving levels of activity in all adults is important, the greatest benefits are often found for the habitually inactive – i.e. those doing less than 30 minutes each week – and intervention with this group is thought to be the best buy for public health (3).

## ***What is the current evidence on exercise referral schemes?***

A recent summary of available evidence that looked at schemes involving sedentary or inactive individuals, individuals with existing health conditions (i.e. CHD, diabetes or depression) and people with other risk factors for disease (i.e. obese, raised blood pressure, stress etc.) found that exercise referral schemes had only a marginal added effect relative to other ways of increasing activity such as brief advice and providing information (4).

## 2: Methodology

To help understand the influential enablers and inhibitors underpinning the BAS, semi structured interviews were undertaken (face-to-face and over the phone) with ‘*stakeholders*’ involved in the BAS. These core ‘*stakeholders*’ originate from three main groups; (i) the *participants*, (ii) *referral agents* – including GP’s and practice nurses, and (iii) the *providers* - including delivery staff and project leaders. The data set of interviews was subject to analysis by asking the following specific research questions:

1. *What are the underlying determinants, processes and features at work within the programme that lead to success?*
2. *How effective is a 12 week programme of exercise referral using Leeds leisure centres and encouraging inactive individuals to do at least 30 minutes of moderate intensity physical activity each week?*

### Data Analysis:

At the point of analysis N=33 (n=18 participants, n=11 referral agents and n=4 providers) interviews had been completed. Interviews lasted between 25-60 minutes and were digitally recorded. Data were summarised through a process of iterative listening with key passages transcribed verbatim, and participants were given pseudonyms. To help address the research questions, a theoretical thematic analysis was completed and framed around the determinants of physical activity (1). Determinants are thought to influence participation and may have causal effects influenced by interpersonal characteristics, physical characteristics and the social environment (5). In addition to this and to provide a richer description of the data, an inductive thematic analysis at a semantic level was undertaken to generate inductive themes linked to the data (6). The themes generated are intended to capture something important about the data in relation to the research questions and represent some level of patterned response or meaning within the data set. The prominence of a theme is not synonymous with a calculable measure; instead, its importance is linked to capturing something central to the research questions.

### 3: Results

#### 3.1: Theoretical Thematic Analysis –

Whilst trying to establish the underlying features of success, the processes that drive these features and the schemes effectiveness, data were mapped against categories of physical activity determinants (1). Table 1 shows the 6 categories/themes of determinants and an example of some possible confounding factors within each one.

Table 1: Determinants of physical activity behaviour among adults

<i><b>Determinant</b></i>	<i><b>Confounding Factors</b></i>
<b>DEMOGRAPHIC &amp; BIOLOGICAL FACTORS</b>	Age, ethnicity/race, gender, income, socio-economic status, marital status, injury, chronic health condition.
<b>PSYCHOLOGICAL FACTORS</b>	Attitudes, barriers to exercise, goal setting, enjoyment, expected benefits, health locus of control, motivation, knowledge, mood, beliefs, perceived health or fitness, personality, self-efficacy, stage of change, stress.
<b>BEHAVIOURAL ATTRIBUTES &amp; SKILLS</b>	Activity history, lifestyle behaviours, time, routine, process of change, coping, ability, motor control.
<b>SOCIAL &amp; CULTURAL FACTORS</b>	Social support from friends/family etc., social isolation, past social influences, exercise class makeup, group cohesion, exercises models.
<b>PHYSICAL ENVIRONMENTAL FACTORS</b>	Access (perceived & actual), facilities, climate/season, cost, setting, traffic, crime, neighbourhood safety
<b>PHYSICAL ACTIVITY CHARACTERISTICS</b>	Frequency of activity, intensity type of activity (mode)

Note: Adapted from Trost *et al* (7)

### 3.1.1: DEMOGRAPHIC & BIOLOGICAL FACTORS –

Demographic and biological factors are strong determinants of participation in exercise programmes; moreover, they were prominent enablers and inhibitors for the BAS scheme. Often, in such settings, individuals who might benefit most provide the greatest resistance to increased activity.

#### Gender:

Associations between inactivity and demographic and biological factors are well documented. Gender – along with age – is the most consistent correlate of physical activity behaviour among adults. For instance, data from LLGA highlights that men tend to be more active than women, and this picture is replicated nationally. Furthermore, these gender differences often affect the type of activity undertaken, and ultimately this variance can determine activity status. One participant reported...

*My husband hates swimming and since the membership has stopped and classes are at different times, he doesn't go at all now. We used to go together, him at the gym and me in the pool; it doesn't work now with the new times.* (Ellen, 63)

#### Age:

The likelihood of inactivity increases with age, however, this decline starts earlier for females, especially with those activities deemed to be of a vigorous intensity requiring higher levels of energy expenditure and exertion. For many individuals who are long-term inactive, experiences of physical activity stemming from organised school sport and PE seems to switch them off from exercising altogether.

*I hated PE at school and then hated anything associated with that like gym stuff.* (Angela, 41)

Further, sport and team activities are rarely undertaken in later life. Among older adults, walking, gardening, swimming, dancing, social events, and golf tend to generate highest participation levels.

*I prefer swimming; I find gym really hard work. Once I get in to it and I'm more fit I'm alright with it, but when you first step on that cross trainer you think I'm gonna have to get off, I don't like it!* (Helen, 30)

The stakeholders were also of the opinion that vigorous pursuits, requiring higher levels of behavioural and exertional intensity, were not the most appealing, especially for the older participants. One GP reported that...

*The gym is easily available, but I don't think it suits a lot of people, most people would probably prefer something a bit easier, whether it's outdoor activity classes or a drop in exercise session.* (Stakeholder)

### Circumstantial prioritisation:

Evidence indicates that there is a steady decline in physical activity during young adulthood. This is often justified by a change in priorities resulting in new time constraints and increased demands on an individual's time - often as a result of family and/or work. Many participants reported how starting a family lead to the onset on habitual inactivity.

*I used to be active at school but as the years went on and I had the children and the children have got older I do less and less, I find myself at home most of the time.* (Claire, 28)

*Your priorities change, children come first, then working, exercise is something you don't really have time for exercise.* (Lyn, 32)

*When I was younger, from college to university, I was always a premier member of bodyline.*

*It was only when I started work and paying my student loans off that I thought, I can't afford this, I don't have time to go, I'm too tired when I get home from work so I cancelled it and haven't done anything since.* (Helen, 30)

With these thoughts in mind, the bodyline access scheme was seen as the ideal chance to 'try out' and get back in to activity. It was important at this stage for stakeholders involved in the pathway to show some empathy towards the participant's situation.

*This was an opportunity to try it and see if it does work and I can fit it in to my busy lifestyle.*  
(Claire, 28)

*When the patient comes in I always try to find some kind of common ground. Once you're on a level with them you can understand what it might be that's of concern to them. Then in a really nice, polite helpful way you can push them in the right direction.* (Practice Nurse)

In addition, it was thought that employment status may actually disadvantage some participants due to the off-peak membership. They would most likely be working during these periods and unable to make full use of, or take advantage of the scheme. Therefore, slight amendments to the timing of the offer may enable this underserved group to access the scheme more regularly.

*The people that are really disadvantaged by this scheme are those that are working and haven't got quite enough income to pay for private gym membership, there pretty underserved. If you could make it available for that group of people, it would undoubtedly make a huge difference.* (Stakeholder)

*The only difficulty for me was the off-peak thing. I work three days a week and an evening would have been the best time for me to go. I would have gone more if there were no like time restrictions.* (Helen, 30)

#### Injury and chronic conditions:

Having a long-term injury or chronic condition appeared to have a strong negative influence on physical activity participation and increase the likelihood of inactivity.

*I've never been over active and I've got arthritic hips now, I can't walk good, I can't go to the gym because I can't move my legs properly.* (Ellen, 63)

Further, patients perceiving their health as poor were unlikely to start let alone regularly attend the BAS. However, because most participants signing up to the BAS share similar positive attitudes and beliefs about exercise, perceptions of exercise ability, feelings of health responsibility and attitude towards exercise are unlikely to predict who will adhere to the scheme. For some individuals, having an injury or chronic health condition acted as a motivator or a driver to facilitate change and move towards activity.

*I had a gastric bypass in January 2013, so my dietician told me about the scheme and someone from the weight management team signed me up.* (Lyn 32)

*I thought, god, I'm so unfit, so fat I need to get myself sorted and that's where it came from really.*  
(Helen, 30)

### 3.1.2: PSYCHOLOGICAL FACTORS –

The initiation, maintenance and resumption of physical activity is rarely easy and many psychological factors are likely to influence an individual's participation. A better understanding of these determinants should enable practitioners designing interventions to optimise participation rates, decrease sedentary behaviour and bring about significant Public Health benefit.

#### Motivation:

Understanding motivation is critical, individuals often face considerable difficulties when attempting to engage physical activity interventions. Motivation to be physically active typically centres on four main factors, two of these relate to performance; (i) *Achievement* and (ii) *Mastery/performance*. The other two relate to fitness and health; (iii) *Physical wellbeing* and (iv) *Socio psychological well-being* (8). In general males are higher than females on the two performance factors and younger participants are less interested than others in socio-psychological well-being. Participants reported a ranged of different factors that motivated them to engage.

*You have to have the motivation don't you; I mean it doesn't matter if its 5 or 50 quid you have to have the motivation to use it. I wanted to do something about it this time.* (Helen, 30)

*I should have been more motivated but I needed the classes to motivate me. It pushed me to go that bit further, do that little bit more that if I was on my own I wouldn't have done.* (Emily, 42)

#### Locus of Control:

This concept stems from a social learning theory approach to personality where general beliefs are thought to develop from expectations based on prior reinforcements and the value attached to them. In this context, locus of control refers to the extent that people perceive that physical activity/opportunities are within their control (internals), or are controlled by others/due to chance (externals). In general, it is thought that those with higher internal locus of control are more likely to adhere to programs. One participant who continued to be active after the BAS scheme had finished reported:

*It was a real good starting point, knowing I could come and go as I please. I've got a full membership now cos I know it's doing me some good.* (Emily, 42)



In contrast, a participant who stopped exercising and being physically active after the 12 week programme finished said...

*With me being on a pension I couldn't commit to a contract in case gas prices went up or anything like that.* (Brian, 57)

These findings highlight the importance of developing interventions that promote internal locus of control.

### Self-Efficacy:

Self-efficacy is an important component of any behaviour and relates to an individual's belief in their ability to organise and execute a course of action required to achieve a goal (9). Performance attainment is thought to be the most powerful efficacy source since it is based on personal experience of success and failure, these experiences are likely to influence expectations of future success. Fundamentally, success raises expectations and repeated failures lower them, especially if the failure occurs early in the course of events. Also, if for example an individual believes that their inability to exercise is due to their lack of co-ordination, this will probably generalise to other similar sporting situations. Many participants reported that as their self-efficacy improved they were willing to try new things.

*After going swimming I felt a bit braver and went for a gym induction, I've never really used the gym before but as you get more confident you try different things.* (Victoria, 49)

Imitation and modelling (vicarious experience) can influence future efficacy beliefs, especially when an individual has empathy with the model. Observing others succeed or fail - especially when an individual has little or no experience to draw on - will impact the outcome.

*I do chat to some of the ladies in my class and they tell me which classes they have tried. If they say its alright then I feel like I can do it too.* (Victoria, 49)

### Goal Setting:

Individuals are not passive responders, instead, they are proactive in their own behaviour change

(10). Goal setting and self-monitoring have been shown to be effective methods to increase physical activity and improve health behaviours (11). Some participants reported the beneficial effects of goal setting in facilitating positive change.

*I still have a long way to go in terms of my weight loss goals, but I'm on my way and I wouldn't be if I hadn't set myself that target.* (Helen, 30)

However, some participants reported that unrealistic goal setting leading to over exertion during sessions could actually have a detrimental effect on their lifestyle, or at least impair mobility and function.

*I overdid it and got a bit carried away on my 3rd straight day, could hardly drive home and couldn't walk for a couple of days after.* (Brian, 57)

Delivery agents reported that having time was important to build relationships with participants and develop an understanding of what they wanted to get out of the BAS. This time was deemed necessary to help formulate methods and mechanisms to assist in the setting, and ultimately achievement of goals.

*I get more time to spend with them than nurses and that's why it's a good idea. I can spend a bit more time on those patients that think their wasting our time. If the come, aren't rushed and can talk about diet and exercise hopefully they can make that change.* (Practice Nurse)

#### Increase Health Awareness:

A persons weighing of the possible gains versus the difficulties that will be experienced as a result of behaviour change is often referred to as decision balance (12). This information is important in the process of change (13). Doctors talking to their patients about the perceived benefits of activity versus the anticipated barriers were beneficial for participants in earlier stages of change.

*I went to the GP for a blood test and after being weighed she asked if I wanted to join. I thought I may have been a little overweight and suffering from anxiety. They talked me through the benefits of exercising and helped me I realised that this would help.* (Brian, 57)

### 3.1.3: BEHAVIOURAL ATTRIBUTES & SKILL –

An individual's behavioural attributes and skill are a way of describing a range of individual characteristics that can be measured and be shown to differentiate ineffective and effective engagement/performance.

#### Activity History:

It is well established that physical activity improves health throughout the lifecourse, from childhood through to older age (14). Of the many behaviours studied as possible determinants of physical activity patterns in adulthood, some of the most interesting findings have involved a person's previous activity and sports participation. For example, when looking at participants engaging supervised activity programmes, there is a positive association with a history of previous participation (1). In essence, adults who participate in supervised fitness programmes are likely to have had a history of doing so. The pattern is similar in relation to spontaneous physical activity, about two thirds of adults with a history of participation in two or more sports in their youth are physically active.

*I hated PE at school and then hated anything associated with that like gym stuff. Then I found this new found passion and really enjoyed it. (Angela, 41)*

*I used to go to a gym in Harehills but I got laid off from work and I couldn't afford to go anymore. I found out about this scheme and started straight away. (Paul, 29)*

Many participants on the BAS reported being active at an earlier point in their life. However, the structured/supervised nature of the majority of sessions may have discouraged individuals with no history of activity or sports participation. These findings reinforce the need encourage physical activity among younger individuals and to distinguish between sport, recreation and fitness-related exercise when describing and marketing activity to patients.

*Lots of my patients are chronically inactive, never done anything. Even though there are these facilities for them they just won't go. (General Practitioner)*

Processes of Change:

People use a range of strategies and techniques to change behaviour, the processes of change describe how people change. There are ten processes of change divided up in to two categories; (i) cognitive processes – involving thinking, attitudes and awareness and (ii) behavioural processes – involving actions. It is generally understood that individuals in the latter stages of change employ more behavioural processes and those in the earlier stages of change use more cognitive processes. For example, many inactive participants who had no real intention of exercising can be seen using the consciousness raising cognitive process of change. Here participants gain knowledge about physical activity in relation to their situation (often instigated by a GP) and realise the potential benefits.

*I've had health problems. I did join slimming world and then had some exploratory tests done at the GP. I wanted to lose weight and it I thought, god, I'm so unfit, so fat I need to get myself sorted and that information from the GP came in really handy.* (Helen, 30)

Another of the key cognitive processes of change for participants in the early stages of change was environmental re-evaluation. Here for example, participants are understanding the consequences of their current inactivity behaviour on their family/health. This was seen as an important factor for many participants looking to start being active.

*My mum's ben quite poorly for the last year, she doesn't eat badly but hardly does any exercise. It kind of struck me then and I though, shit, I do need to look after myself.* (Angela, 41)

*I wanted to lose weight, and I suffer from anxiety and panic attacks so I knew that this would help and get some mental health benefits.* (Brian, 57)

In some instances, by exercising regularly, some participants thought that it may enable them to become a better role model for significant others.

*My little girl is really little, and when she gets older I don't want to think, oh I can't be bothered going to the park and stuff. I want to be motivated to go outside and do things and I don't want her to be a couch potato.* (Helen, 30)

For those participants in the latter stages of change, the behavioural processes were more prominent. The process of change most noticeable was helping relationships. Here participants usually had someone they could depend on to help them exercise. Sometimes, this came in the form of encouragement from a friend or instructor who provided support in being active. This often helped participants to maintain an active lifestyle.

*I should have been more motivated but I needed the group to motivate me. It pushed me to go that bit further, do that little bit more that if I was on my own I wouldn't have done. (Emily, 42)*

### Coping:

This concept refers to thoughts and actions that an individual uses to deal with threatening situations – like attending the BAS. Individuals who ‘cope’ normally encompass high levels of self-efficacy and the ability to generate coping responses for anticipated high risk scenarios. Two of the most widely accepted coping strategies are problem-focussed coping and emotion focussed coping. Problem-focused coping involves efforts to alter or manage a problem by gathering information, goal setting, time management skills and problem solving. This method is more often employed when situations are amenable to change. These skills were evident for many of the participants interviewed who continued to be active.

*I go out walking a lot now cos I can't really afford the gym membership. I used to love walking before I had kids; it's something I'm able to do now because when I was so big it was difficult to do anything. (Lyn, 32)*

Emotion-focussed coping involves regulating the emotional responses that a problem brings. It includes specific behaviours such as relaxation, meditation and cognitive efforts to change the meaning of a situation. This strategy is used more often when a situation is not amenable to change.

*I was a bit apprehensive at first, I was walking down there and I thought, no no, not today, maybe I'll just wait for another day, and what if there are kids there, they can be nasty sometimes. I was a bit scared at first but I thought if I didn't do it this time I might just keep putting it off. (Amy, 42)*

### 3.1.4: SOCIAL & CULTURAL FACTORS –

Relationships and interactions with others can have a strong impact on behaviour. The social and cultural determinants of physical activity are thought to be the strongest independent predictors of being physically active (1).

#### Social Support:

Social influences in the form of social support and prompting typically have strong positive associations with physical activity. The presence and interest of other people provides reinforcement and keeps the behaviour prominent. Changing a behaviour – i.e. moving from inactive to active – can be stressful, therefore, maintaining social support is essential for individuals and groups (15). It is important to remember that behaviour is not independent of the context in which it occurs, participants will be influenced by their social environments (10). Many participants reported that positive social elements within the programme helped them to deal with adversity when starting to become active. For some participants, the leisure centre setting facilitated an environment for social interactions that may not have occurred in other everyday situations. This enabled participants to interact socially and develop social support networks more readily.

*If you build a little social network you will do it, if you're on your own it just won't happen.*

(Matthew, 67)

*A lot of people just go for the social really, they don't do much swimming it's mainly about chatting.*

(Irene, 52)

A sense of belonging to the group was also important. The degree to which an individual is integrated into society and has social support networks have been shown to have a significant impact on general health (15). Participants who may have previously felt socially excluded were given the chance to mix with like-minded individuals and engage in physical activity.

*The classes helped me come out of my shell a bit, to realise that you don't just have to be at home trying to exercise. It gets me out meeting new people, widen my social circle.* (Amy, 42)

For those participants lacking social support networks to help them engage in activities requiring a partner, or those preferred being physically active in a group setting, the BAS afforded opportunities to alleviate this barrier.

*The first time I went with another girl and her mum, after 2 weeks they couldn't do the same times as me so I ended up going on my own. For the first couple I'm really glad I went with someone. I don't think I would have done it on my own; it would have been quite embarrassing.* (Lyn, 32)

#### Peer to Peer Support and Mentors:

A considerable proportion of participants reported that utilising the skills and experience of individuals within the BAS/community helped them to be more active. These peer mentors could be friends, colleagues, family or BAS staff members. They helped to encourage and assist participants develop their physical activity potential and was often achieved by listening or inspiring participants. Peer mentors were seen as an integral to helping participants cope/overcome social or emotional barriers while staying motivated to reach their goals.

*She was really understanding, took you as a real person, you know, really spoke to you like a real person and I liked that. It was the 1st time I had had that 121 touch and I really liked it.* (Claire, 28)

For inactive participants who were struggling with social support, many of the people interviewed reported that developing peer support/mentoring would be beneficial to generate initial engagement. For example, phoning the participant to arrange a first visit or a first visit buddying system may help overcome many of the barriers faced by participants when starting a physical activity programme. Beyond that, text messaging and group meetings were suggested as potential ways help to maintain behaviour.

*I think a buddy system might work, if there was somebody in a similar situation. I was really shy and pretty quiet and everything and it did feel daunting walking in for the first time.* (Lyn, 32)

*Me and my husband went together for our 1st visit, it really helped to have someone else there that first time.* (Ellen, 63)

*People can be frightened of exercise, once they get home and dwell on a decision to participate it can become too much. It's a lack of confidence, people don't want to go on their own and even if it's a group they often don't know people. If you can get people to hold their hand through the process, it's bound to help.* (Practice Nurse)

Equipping practitioners with the necessary competencies and skills to support an active lifestyle is essential (16). By encouraging flexible participation - seen as a key facilitator for adoption, BAS staff were able to get participants active gradually. The staff and their ability to interact with the participants on a personal and social level were seen as key factors in facilitating adoption of the BAS.

*There is always an alternative to whatever exercise we are doing because you can never tell what people can and can't do before they start. We will find out and screen for those who haven't done exercise before and give them special attention if you like.* (Gym Instructor)

The group dynamic within the sessions were also seen as important for adherence. Social relationships and social norms have a substantial and persistent influence on how people behave (10). Social learning theory explains how social norms and social influence affect individual behaviour. The stronger ones affiliation to the group the more responsive an individual will be to the normative expectations of that group. Many participants reported that once they felt comfortable within the group, it enabled them to overcome barriers and maintain behaviours.

*It's not the best leisure centre but I keep going back because the group is sociable. It works for us and it's easy to get to know people.* (Amy, 42)

*There are a lot of ladies my age in the classes, I'm a bit quiet so the social element is important, but if I want to go and just nod and smile I can.* (Victoria, 49)



### 3.1.5: PHYSICAL ENVIRONMENT –

In population terms, the visible fitness boom of the 21<sup>st</sup> century has failed to compensate for the loss of more traditional forms of energy expenditure. Changing patterns of work, transport, entertainment and communication mean that we have practically engineered physical activity out of our daily lives, making it possible to be virtually inactive but occupied. Taking a broad ecological perspective to understand physical activity behaviour, there is currently an increasing interest in the role that the physical environment plays (7). The physical environment can offer prompts and opportunities for physical activity including both natural and built environmental factors, at the same time, it is also important to consider the individual and community level influences.

#### Setting:

Behaviour choices are not made in a vacuum and it is unreasonable to expect individuals to become more active when inactivity is so strongly reinforced by their environment and prevailing social norms. Consequently, the 'setting' or location was seen as a major component of successful uptake and increased activity. Many participants reported that the setting had to be easily accessible to help adopt and maintain activity behaviours.

*We live very close to the centre, so location is very important to us. I can drive but I don't like driving so being able to walk there really keeps me going. (Ellen, 63)*

*It has to be local, our patients are generally there middle class working people, they don't want to travel to exercise. (Stakeholder)*

This setting, whilst not always ideal, appeared to help some participants evaluate their physical environment and find more suitable, alternative settings for activity after completing the BAS scheme. In some instances, whilst the alternatives were not always part of the offer, previously inactive participants appeared to have made a lifestyle choice to be active as a result.

*The only reason I didn't join bodyline after was due to the location, Total Fitness is in a miles better location for me and really saves me loads of time. (Angela, 41)*

Whatever the possible setting – typically leisure centres, it seemed that specific elements could aid successful uptake and activity behaviour. This ease of access, including location and familiarity with the venue was important, as this could provide a safe and trusted environment where

participants could feel more relaxed and in control.

*I was a bit concerned they were going to treat me special as I was on some kind of discount scheme but no, I was given an induction and it was all good. (Lyn, 32)*

This familiarity did not just mean places that people had already visited *per se*, but could include settings that had appeal to inactive individuals. Even if they did not identify as an active gym member, they may still recognise the setting as ‘friendly’ and therefore comfortable and familiar.

*The first time I went I went with a friend so I didn't feel awkward, once we got in there they were lovely staff, talked you through it and just got stuck in. They were really welcoming.*

(Claire, 28)

### Facilities:

Linked to the notion of setting were facilities. Participants reported that this factor was also a key factor in continuing to engage the program once they had started. Given the range of barriers facing many inactive participants, being able to have your child looked after for example while exercising was a concern for mothers. Whilst many centres offer this facility in some capacity, it was not always seen as an enabler.

*There is a crèche here, it's only on a Thursday, you have to book it and it's only for a certain amount of time and it costs extra so I've never used it. It means I have to wait for my mum or whatever so it does make it difficult being a mother. (Helen, 30)*

Further, within each centre it was reported that the décor, equipment and amenities were subject to variations in quality. It was perceived that some centres were in less than optimal condition, and therefore not conducive to repeat visits. In some instances, this factor put an end to engagement, but for those fortunate enough to drive and overcome this barrier, there was the opportunity to broaden their horizons and explore the offer.

*I've been to about 6 different centres; I drive so I would sooner go to a quitter nicer centre than one that's old and grubby, Pudsey is a bit grim. (Helen, 30)*

In addition to this, some participants reported concerns about the facilities ability to cope with the rising demand for some sessions, especially during busy periods such as school holidays. For certain groups, this became problematic and suggested that it may be beneficial to separate exercisers by age or ability.

*I enjoy it whilst I'm there; the only thing that puts me off is the school kids. It's absolutely packed at the time we can go; they don't rope it off so it's difficult at the minute. A separate kids and adults scheme would be fabulous.* (Ellen, 63)

### Cost to the participant:

Cost is commonly professed to be a major determinant to initiating physical activity. It is seen as a common cause for dropping out or not even starting a programme of exercise, and repeatedly coupled with reduced participation. This factor is also generally accepted to have a greater effect in low-income groups. Participants and stakeholders alike reported that the cost of exercising, specifically joining a gym, as the main inhibitor to being active. Finding and redirecting limited funds towards a gym membership was almost seen as frivolous in the context of other financial commitments, especially if it transpired that the investment was not going to be utilised.

*You're talking about £60 a month for a gym membership. It's ok signing up to it but if after a week you think it's not for me, you're stuck.* (Claire, 28)

*You have to bear in mind that for a lot of people, income is a major factor. They don't have that money to spend to acquire a gym membership.* (Stakeholder)

However, given the low cost implications of the BAS scheme, this was seen as a great opportunity to *test the water* and get 3 months' worth of gym membership for a nominal cost. Many inactive participants reported that the low cost was a primary enabler to activity.

*The bodyline scheme has been great for us; it has a universally high uptake and the locality of the gym with the financial incentive, it's a no brainer.* (Stakeholder)

*I thought there was a big gap for people who don't know where to start, this offer is great, if you only go and do 5 minutes in one session for example, you don't feel like you have wasted your money. Those 5 minutes were exactly what I needed to start building myself back up again.*

(Emily, 42)

Many of those participants recruited to the scheme completed the 3 month trial period, nevertheless, once the BAS had ended; some had reverted back to previous sedentary behaviours and habits, citing cost as the principal cause. This was thought to have implications for future

programmes with some citing that motivation had dwindled and they may struggle to re-engage.

*Sadly it's finished. I got a letter saying it was coming to an end and you get so much off the full membership and everything, but I couldn't afford it and now exercise has been put to one side mostly due to the money side of things. I've lost a lot of motivation now and know how hard it is to get back in to it.* (Lyn, 32)

On the other hand, some participants completing the trial period reported that as a result of engaging, they would go on to join 'Bodyline' as a full member. This suggests that the scheme has worked for these individuals, that is has overcome determinants to activity and created a lifestyle change.

*I've finished the programme but I have got a proper membership now and I go at least three times a week.* (Helen, 30)

*Some people are thinking about continuing once the membership ends even though they will have to pay for it.* (Stakeholder)

While cost presented an easily articulated obstacle, it is hard to fully understand to what extent it effects recruitment. These perceived financial barriers may merely proxies for poor individual motivation. Therefore it would be helpful to understand that if financial barriers do exist, will removing them result in increased activity. Whilst eliminating or reducing the cost appeared to get people to come in the first instance, it seems that once the cost reverts back, people that have engaged are willing to pay for exercise indicating a shift in motivation or that they now see a value in paying for exercise.

On top of this, some participants reported additional, hidden, costs associated with participation that they would have liked to have been made aware of prior to engaging the BAS.

*Having to go out and buy sportswear and things like that killed me. When you're going to classes and things like that, the first thing the teacher says to you is "you need appropriate footwear and sportswear". So more understanding about what you would need before you got in to it would be really helpful.* (Claire, 28)

### 3.1.6: PHYSICAL ACTIVITY CHARACTERISTICS –

Relating to the FITT principle (Frequency, Intensity, Time & Type or mode), the impact of the physical activity characteristics are likely to vary depending on the individual and their personal goals. Further, it is important to remember that different physical activities will require varying skills for maintained participation.

#### Frequency:

This relates to how often an individual performs the activity. One of the main benefits of the BAS scheme was the unlimited access at off-peak times which many participants who had signed up were keen to take advantage of. The fact that they could go as often as they wanted was seen as a key enabler towards an active lifestyle.

*I was going 4 times a week, really cramming it in, classes like body combat, kettle bells and things like that, on a Sunday I would swim with my daughter.* (Claire, 28)

However, it is important that all participants - particularly those who are chronically inactive - not to overdo it, especially at the initial stages of engagement. If the frequency is too great, it may have adverse effects resulting in fatigue, injury and in due course probable relapse to previous sedentary behaviours.

#### Intensity:

This can be measured in numerous ways, but activity intensity is usually split in to four distinct categories (i) sedentary, (ii) light, (iii) moderate and (iv) vigorous intensity. This intensity relates to how hard a person is exercising during an activity period. As with frequency, this specific physical activity characteristic was integral to an individual's adoption and maintenance of the BAS scheme. For longer term maintenance of physical activity behaviour it is generally accepted that moderate and lower intensity activities are better buys than vigorous intensity. Participants reported that harder – vigorous intensity – sessions could be difficult and off-putting. As a result, best practice dictates the necessity to match the intensity to the individual where possible.

*When I first started going I did struggle, it's an hour of intense work out.*

*You have to pick what's right for you because if you show up she wants to push you; she said "we don't come here for breakfast".* (Claire, 28)

Lifestyle activity does not tend to differ by demographic factors, but men and younger adults are more likely to engage in vigorous activities. High intensity programmes are likely to result in a substantial number of dropouts due to stress-induced injury. Therefore, physical activity can produce results that encourage or discourage subsequent participation. For example, perceived discomfort during an exercise programme, regardless of exertion, is often reported by dropouts.

### Time:

This relates to the length of time undertaking the activity – not the time that the activity takes place - and will vary depending on the health, or fitness related component that has been targeted (i.e. achieving a level of fitness or meeting the activity recommendations). Time spent in a given activity needs to be tempered by the other physical activity characteristics and driven by the goals of the individual. Spending too much time doing one activity may be counterproductive resulting in injury or a lack of fun/enjoyment. Participants realised the importance of time for maintenance of a newly acquired behaviour in that it had to be achievable and undertaken on a regular basis.

*When I was a lot, lot younger or went on holiday I used to swim, but nothing like I do now.*

*I'm now going twice a week for an hour each time.* (Ellen, 63)

### Type or Mode:

Referring to the specific physical activity chosen, type or mode of activity is hugely important and needs to be enjoyable and/or fun if it is to have any chance of encouraging inactive participants to become active. The practice of designing activity plans exclusively on the basis of fitness and a biological dose-response often disregards important perceptions of the enjoyment of the activity itself. Participants, who were able to customise the type/mode - and the other physical activity characteristics - to suit, reported the greatest enjoyment and presented the highest likelihood to maintain the behaviour.

*I told the guy who put my programme together exactly what I was looking for. The programme lasted an hour using most of the equipment and then I went for a swim. It was hard motivating yourself to get there, but once I was there I loved it.* (Lyn, 32)

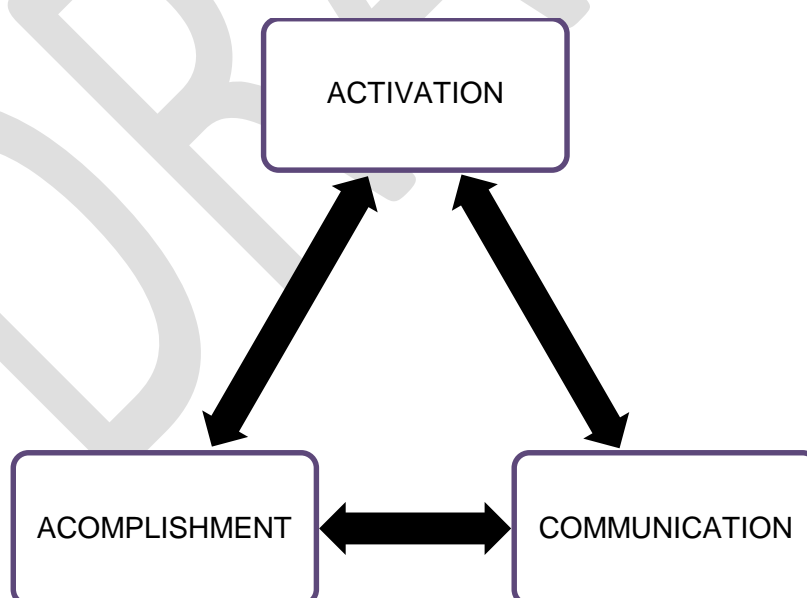
For these reasons, the 'FITT' principle is crucial in facilitating adoption and adherence to any activity programme.

### 3.2: Inductive Thematic Analysis –

In this section, the inductive process allowed the data to be coded without fitting it into a pre-existing coding frame as in the previous section. Adopting an essentialist/realist approach, due to the simple, largely unidirectional relationship that is assumed between meaning, experience and language we were able to theorise motivations, experience and meaning from the data.

With this in mind, once the interviews with the principle stakeholders were undertaken, we were able to identify three main interacting themes underlying dialog about the BAS. These were (i) **Activation**, by initiating action and doing activity (ii) **Accomplishment**, which was about achievement through effort, time and commitment, and (iii) **Communication**, linked to relationships, intervention messages and how stakeholders communicate with each other (see figure 1). These three themes underpin the determinants and the development opportunities for the BAS and are inextricably linked. The following provides some context around these themes.

Figure 1: Underlying themes within the BAS



Adapted from Carless (2008)

### 3.2.1 ACTIVATION

A reoccurring theme within the interviews was structured around the concept of 'Activation'. However, the 'Activation' process is conceptualised in a different manner between, and within the different stakeholder groups (i.e. participants, referral agents and providers). Nevertheless, this theme incorporated some form of physical process/bodily movement or cognitive development.

Prior to the BAS, many participants were not fully aware of the implications of their current in/activity behaviour. In most cases referral agents instigated the 'Activation' process by offering a referral to the BAS and talking through the associated benefits of a physically active lifestyle. For some participants this 'Activation' came through a friend or family member who had either been on the scheme previously, or heard about it elsewhere.

*It's generally not them asking about the service, we have to almost sell it.* (Practice Nurse)

*From a primary care service it is a fantastic service, somebody may come in and say 'I want to lose weight doctor', it's a great resource to point them towards.* (GP)

*I had been chatting with a friend who told me about the pass.* (Victoria, 49)

This initial 'Activation' was central to the project success, and in many instances, when this procedure had occurred successfully participants were ready to begin the process of becoming active. The referral agents effectively empowered the participants to take control of their own physical activity behaviour and they began to attend sessions. Importantly, for those participants that required more assistance in the 'Activation' of a physical activity/exercise programme, the BAS providers (gym instructors) were on-hand to help develop this or provide assistance.

*Not many people turn up and can't do anything, but ultimately it's down to the instructor to adapt the class to meet the needs. We talk to the customers a lot about what they want, intensity etc.* (Instructor)

Support appeared to be central to lowering attrition and increasing attendance in previously inactive participants. Developing a tailored programme matched to an individual participant's ability was a vital factor in creating a routine and building maintenance of a physically active



lifestyle. A physical activity/exercise routine enhanced the 'Activation' process for participants as it became part of their daily/weekly lives. For some it was as simple as keeping busy and a reason to get out of the house. For others it was about having somewhere to go and something to do. Either way, when coupled with advice from referral agents, routine became a powerful tool.

*I'd got to the point where I weren't doing anything, so that was the kick I needed to get back in to some kind of exercise routine.* (Angela, 41)

*It's a matter of getting into a routine, every day this week we have been out.* (Matthew, 67)

*Now I've got some kind of routine going it gives me that kind of good feeling and I don't want to lose it.* (Helen, 30)

However, this routine was predicated on being able to attend the sessions available on the off-peak membership. For some participants this restricted membership was problematic and developing a routine became difficult, in some instances, it was counterproductive for 'Activation'.

*When you work it's really difficult to fit it all in and use it. Off-peak was no good for me and I lost motivation to do it, I felt I was missing out.* (Victoria, 49)

For many BAS participants, the physical 'Activation' process starting by understanding their activity behaviour and beginning an activity programme. This often developed into a routine and in turn activated some psychological changes. Many participants noted a significant improvement in confidence and motivation to undertake exercise programmes, developed themselves or in conjunction with a BAS provider. This confidence was critical for change among inactive BAS individuals and was reinforced by some providers (instructors). Many participants reported that this was a key factor in continuing to engage when circumstances became challenging.

*It's how you feel within yourself, you know, confidence. When you come out of the gym you feel 100 times better than before you went in, whatever situation you are in.* (Paul, 29)

*I'd been given the chance and I wanted to use it to its full capacity! I wasn't going to go like I don't feel like it today, I was given 3 months and I wanted to make sure I got it all in.* (Claire, 28)

### 3.2.2 ACOMPLISHMENT

The second theme to come across in the data was characterised by 'Accomplishment'. Central to this theme were accounts that focused on doing something well or being successful by virtue of effort, skill, time or commitment. 'Accomplishment' often brought with it a range of positive feelings or a sense of satisfaction. However, where targets were not accomplished or goals were not achieved, these positive feelings could be replaced by a sense of failure or underachievement. It is therefore important to manage the dichotomy of outcomes within 'Accomplishment'.

The aim of the BAS was to encourage inactive individuals to sign-up and take advantage of the heavily subsidised membership. To achieve this, it was important for the referrers and providers to generate uptake of the BAS and optimise the number of referrals. Referral agents (GP's and practice nurses) felt a sense of 'Accomplishment' when a participant was successfully referred and this 'Accomplishment' often helped to update and refine their approach to working with inactive individuals.

*I see newly diagnosed diabetics, when they come in we talk through the condition, possible lifestyle complications and work with them to achieve targets with their lifestyle. It's really good to know we are making a difference with them.* (Practice Nurse)

Once a BAS referral had taken place, the onus on 'Accomplishment' was typically transferred to a participant. Many participants signing up to the scheme set targets or goals - either by themselves or with assistance from referral agents/providers. These were normally in relation to losing weight, getting fitter or attending so many sessions each week. The sense of 'Accomplishment' - by doing something well or being successful - acted as a driver for many participants to continue with their new activity behaviour.

*I was 2 stone over weight when I started and I lost 2 and a half stone over the three months. My breathing was a lot better, you get naturally fitter, have more energy and generally feel better about yourself, like you have actually done something.* (Paul, 29)

*I wanted to lose weight and in the end I was swimming 2/3 times a week 80/120 lengths, whereas I was doing nothing before, I've lost a stone!* (Irene, 52)

Accomplishing a physical activity or exercise goal is thought to provide traction for participants to gradually take charge of their health and trigger an overall sense of autonomy. The effect may not take the shape of a perceived physical change, but rather empower them for further change. For example, once an initial goal or target had been accomplished, in many instances, it gave participants the confidence to accomplish further goals and confidence to engage in future activity.

*After going swimming I felt a bit braver and went for a gym induction, I've never really used the gym before but as you get more confident you try different things.* (Victoria, 49)

Behavioural strategies often incorporate goal setting and self-monitoring (11). However it is important that any goals or expectations set by the participants themselves - or instructors - are realistic and achievable. It can be a fine balancing act between challenging and over exerting participants. As much as accomplishing a goal or target can be a positive experience, failure to achieve a goal or having a target that is out of reach can be counterproductive. Any negative experiences this may produce can be so detrimental that it undermines any subsequent interest in living actively. Previous experiences of exercise can be so aversive that they cause outright rejection of even the idea of ever becoming involved again. Central to these aversive experiences are those relating to competition and to handling high level exertion; when competition entails social judgements of competence and social standing. For many inactive individuals these are powerful reasons not to engage.

*My friend isn't as confident as I am, the instructor was encouraging her saying "come on, push yourself, push yourself" and she walked out in the end. It was just too hard for her.* (Claire, 28)

*I got a letter saying it was coming to an end and you get so much off the full membership and everything, but I couldn't afford it. It would have been nice if they had mentioned the get active thing then. I've lost a lot of motivation now and know how hard it is to get back in to it.* (Lyn, 32)

*I prefer swimming; I find gym really hard work. Once I get in to it and I'm more fit I'm alright with it, but when you first step on that cross trainer you think I'm gonna have to get off, I don't like it!*

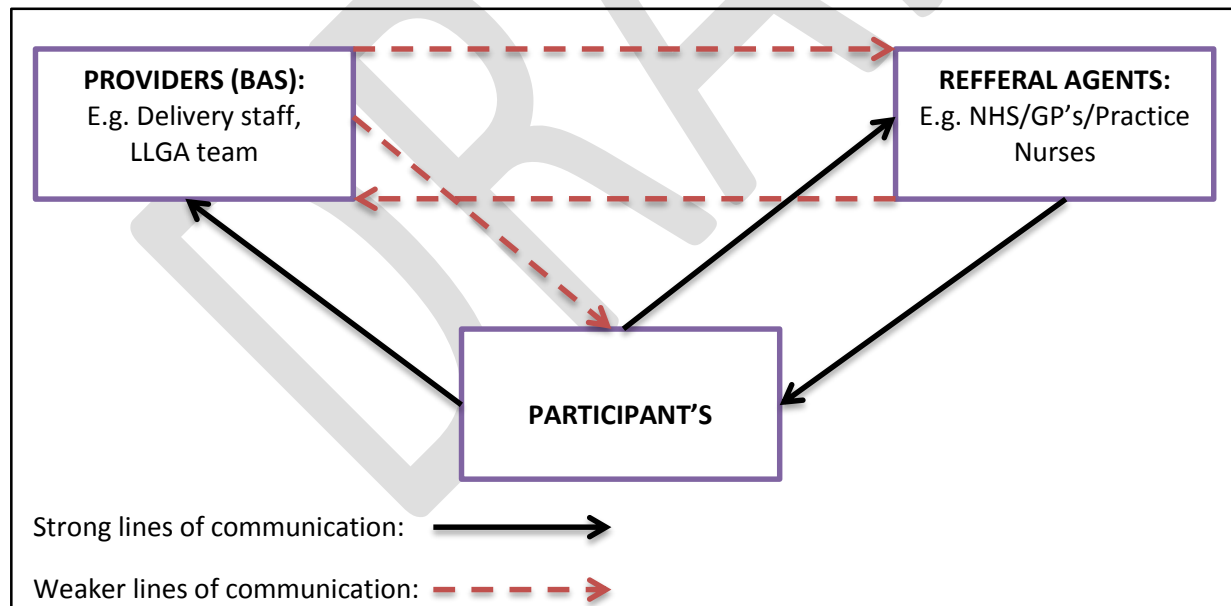
(Helen, 30)

### 3.2.3 COMMUNICATION

The final theme emerging from the data was characterised by '*Communication*'. Shared experience and interaction, relationships, intervention messages and how stakeholders communicate with each other were the characteristics of this theme.

One of the main determinants to the success of the BAS concerned communication – and pathways for communication - between the participants, providers and referral agents. At present, participants or referral agents can instigate the process of enrolment to the BAS scheme. Many participants reported hearing about the BAS from friends and family and then consulting their GP. Other pathways to the scheme can be prompted by referral agents who inform potential participants about the scheme and provide them with information about how to register. The lines of communication between the stakeholders and strength of those lines are depicted in figure 2 below.

Figure 2: Communication pathways between BAS stakeholder



Based on the data, figure 2 indicates that participants had strong lines of communication with the BAS providers when they wanted to contact them. They felt able to ring, or physically go in to a leisure centre and discuss an enquiry or issue they may have. At the same time, participants had strong lines of communication and good dialog with the referral agents (GP's and Practice Nurses).

Having made an appointment with the referral agents, participants could discuss their exercise needs with them.

On the whole, the referral agents reported the ease in which they could contact participants and the relatively coherent pathways they had in place for doing so. However, regarding the BAS, many referral agents felt that communication with the providers was more difficult. Specifically, many referral agents reported the confusion they faced when trying to signpost potential participants to the BAS and other offers from BAS providers. It was thought that there were many exercise offers available simultaneously, together with the BAS. Among other issues, this made it difficult to determine what was actually available for each participant.

*It's quite fragmented, the information has to be up to date. I don't know what's current, what's available, what the cost is, so if you're not sure you're not going to push it.* (General Practitioner)

*We use the LLGA website that has been hit and miss for most patients, it's hard to give a consistent message.* (Practice Nurse)

*The problem is there are so many 'things' we need to know what they are and who goes where!*  
(General Practitioner)

Nevertheless, there were solutions proposed by the referral agents. Many reported that they found the LLGA website difficult to navigate and that they often preferred to use paper based methods as an aid to signpost participants. Potential solutions offered by general practitioners included the development of a paper based and on-line LLGA/BAS flowchart that would be available in surgeries/offices. This would enable the referral agents to improve the referral process and develop an understanding of what criteria needed to be met for a referral to each element of the programme, at each stage of the pathway. Further, the flowchart would make a useful tool for communicating how the processes worked, and for documenting how to refer. Also, mapping out the process would clarify all the stakeholders understanding of it and help to improve it.

*Paper based things in your room work better than on-line, much easier to refer to.* (General Practitioner)

*You just need a really simple flow chart to show that this person goes here and this one goes there.*

*If you look in most GP's rooms they have these simple charts and they have them because they work.* (General Practitioner)

In addition to this, there was thought to be further communication issues once the participants had been referred to the scheme by the GP's/Practice nurses. At present, once a participant is referred to the BAS scheme, the referral agents receives no further information from the providers about their participant's engagement. This meant that the referral agents have no idea of participant's achievements, and subsequently, which referral methods worked, who they work for and in which circumstances they worked. Referral agents thought that even simple information including who signed up, who attended and how often they attended would be beneficial for the service as a whole.

*The sad thing is I know that the patients would be open to it and benefit from it, but it has to be straight forward.* (General Practitioner)

*It would be good to know how many have actually gone on to do it, we don't know who actually takes it up so it's really hard to say if it works or not or what the impact actually is.* (Practice Nurse)

*Once we have sent them it would be nice to know about attendance and what have you, at the minute we don't even know if they have gone.* (Practice Nurse)

## 4: References

1. Buckworth J, Dishman R. Exercise Psychology. Illinois: Human Kinetics; 2002.
2. Department of Health. Start Active, Stay Active: A report on physical activity for health from the four home countries" Chief Medical Officers. London: Department of Health; 2011.
3. Blair SN, Kampert JB, Kohl HW, 3rd, Barlow CE, Macera CA, Paffenbarger RS, Jr., et al. Influences of cardiorespiratory fitness and other precursors on cardiovascular disease and all-cause mortality in men and women. *Jama*. 1996; 276:205-10.
4. National Institute for Health and Care Excellence. Exercise referral schemes to promote physical activity. London: National Institute for Health and Care Excellence 2014.
5. Sallis J, Owen N. Physical activity & behavioural medicine. London: Sage; 1999.
6. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in psychology*. 2006; 3:77-101.
7. Trost SG, Owen N, Bauman AE, Sallis JF, Brown W. Correlates of adults' participation in physical activity: review and update. *Medicine and science in sports and exercise*. 2002; 34:1996-2001.
8. Ashford B, Biddle S, Goudas M. Participation in community sports centres: motives and predictors of enjoyment. *Journal of sports sciences*. 1993; 11:249-56.
9. Prochaska JJ, Spring B, Nigg CR. Multiple health behavior change research: an introduction and overview. *Preventive medicine*. 2008; 46:181-8.
10. Jackson C. Behavioral science theory and principles for practice in health education. *Health Education Research*,. 1997; 12:143-50.
11. Conn V, Hafdahl A, Mehr D. Interventions to increase physical activity among healthy adults: Meta-analysis of outcomes. *Am J Public Health*. 2011; 101:751-8.
12. Marcus B, Forsyth L. Motivating people to become physically active. 2nd ed. Illinois: Human Kinetics; 2009.
13. Prochaska JO, DiClemente CC. Stages and processes of self-change of smoking: toward an integrative model of change. *Journal of consulting and clinical psychology*. 1983; 51:390-5.
14. Department of Health. At least 5 a week: Evidence on the impact of physical activity and its relationship to health. London: Department of Health; 2004.
15. Naidoo J, Wills J. Health Promotion – Foundations for Practice. Second Edition ed. London: Bailliere Tindall; 2005.
16. National Institute of Health and Clinical Excellence. Behaviour Change at Population, Community and Individual Levels. London: National Institute of Health and Clinical Excellence; 2007.